UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,126	03/11/2004	Avi Kopelman	25537Y	4668

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EXAMINER
WILSON, JOHN J

ART UNIT	PAPER NUMBER
3732	

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12/10/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

mrJ

Interview Summary	**Application No.**	**Applicant(s)**
	10/797,126	KOPELMAN ET AL.
	Examiner	**Art Unit**	
	John J. Wilson	3732	

All participants (applicant, applicant's representative, PTO personnel):

(1) _John J. Wilson_.   (3)_____.

(2) _Stanley N Protigal_.   (4)_____.

Date of Interview: _06 December 2007_.

Type: a)☒ Telephonic   b)☐ Video Conference
c)☐ Personal [copy given to: 1)☐ applicant   2)☐ applicant's representative]

Exhibit shown or demonstration conducted: d)☐ Yes   e)☒ No.
If Yes, brief description: _____.

Claim(s) discussed: _1-24_.

Identification of prior art discussed: _Taub et al, Jordan et al_.
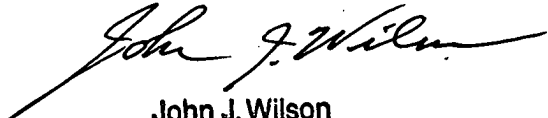
Agreement with respect to the claims f)☐ was reached.   g)☒ was not reached.   h)☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: _A proposed amendment, see attachment, was discussed including a discussion of how orthodontic rules are applied. The examiner stated that the proposed claims contain new limitations that would require further search and/or consideration_.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Attachments:
☑ _Proposed Amendment_

John J. Wilson
John J. Wilson
Primary Examiner

Examiner Note: You must sign this form unless it is an
Attachment to a signed Office action.   _____
Examiner's signature, if required

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:
      KOPELMAN, et al.   Confirmation No. 4668
Serial No. **10/797,126**   Group Art Unit: 3732
Filed: March 11, 2004   Examiner: J. Wilson

For: **METHOD AND SYSTEM FOR ASSISTING IN APPLYING AN ORTHODONTIC TREATMENT**

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DISCUSSION DRAFT - PROPOSED CLAIMS

For interview of December 6, 2007

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Listing of Claims:

1.   (currently amended) A method for facilitating the correct placement of one or more brackets on corresponding one or more teeth according to a predetermined treatment scheme, the method comprising:

obtaining a virtual representation of a three-dimensional teeth arrangement of <u>a plurality of teeth on</u> one or both jaws of the individual with brackets placed on said teeth, the position and orientation of the brackets on said teeth in the virtual representation ~~;~~ ~~being~~ designed so as to achieve a desired treatment outcome;

processing said virtual representation to generate an output data, the output data driving a display to display a virtual image of at least one tooth with a bracket thereon, the displayed image having three-dimensional qualities indicative of said at least one tooth as viewed from a defined viewpoint, ~~wherein~~ said three dimensional representation ~~is~~ suitably coded so that said displayed image appears as a three dimensional virtual image when said displayed image is viewed via a suitable optical arrangement<u>, and said three dimensional virtual image according to rules applied to achieve the treatment outcome and display the treatment outcome;</u> ~~and~~

while placing said one or more brackets directly on corresponding said one or more teeth of said individual, using said displayed virtual image as a visual comparison guide to assist in proper positioning of said one or more brackets directly on corresponding said one or more teeth of said individual<u>; and</u>

<u>providing at least one additional view based on a different viewpoint for viewing the teeth</u>.

2.   (original) The method of claim 1, wherein the defined viewpoint is a preferred viewpoint, being a viewpoint corresponding to that from which the at least one tooth is viewed when applying a bracket thereon.

3.   (original) The method of claim 1, wherein the output data drives the display to display a set of images of the at least one tooth from two or more preferred viewpoints.

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4.   (original) The method of claim 1, wherein the output data drives the display to display a set of images of different teeth.

5.   (original) The method of claim 4, wherein the different displayed teeth are displayed in an order in which the teeth are attended to during bracket placement procedure.

6.   (previously presented) The method according to claim 1, wherein said display is a computer monitor.

7.   (original) The method according to claim 1, wherein said display is a printer.

8.   (original) The method of claim 1, wherein the obtaining of a virtual representation comprises transmitting said representation from a remote location.

9.   (original) The method of claim 1, wherein the obtaining of a virtual representation comprises receiving data representative of three-dimensional arrangement of teeth of at least one jaw and processing said data to define position and orientation of brackets on the teeth to achieve a desired treatment outcome.

10.   (original) The method of claim 9, wherein the data representative of a three-dimensional arrangement of teeth of at least one jaw is received from a remote location.

11.   (currently amended) A system for facilitating the correct placement of one or more brackets on corresponding one or more teeth according to a predetermined treatment scheme, the system comprising:
        a processor module for obtaining a virtual representation of a three-dimensional teeth arrangement of <u>a plurality of teeth on</u> one or both jaws of the individual with

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brackets placed on said teeth, the position and orientation of the brackets on said teeth in the virtual representation ~~being~~ designed so as to achieve a desired treatment outcome and for processing said virtual representation to generate an output data, the output data adapted to drive a display to display a virtual image of at least one tooth with a bracket thereon, the displayed image having three-dimensional qualities indicative of said at least one tooth as viewed from a defined viewpoint, ~~wherein~~ said three dimensional representation ~~is~~ suitably coded so that said displayed image appears as a three dimensional virtual image when ~~said displayed image is~~ viewed via a suitable optical arrangement, and said three dimensional virtual image according to rules applied to achieve the treatment outcome and display the treatment outcome, such that, while placing said one or more brackets directly on corresponding said one or more teeth of said individual, said displayed virtual image may be used as a visual comparison guide to assist in proper positioning of said one or more brackets directly on corresponding said one or more teeth of said individual; and

a display linked to said processor module for displaying said image.

12.   (original) A system according to claim 11, wherein said display is a computer monitor

13.   (original) A system according to claim 11, wherein said display is a printer.

14.   (original) A system according to claim 11, wherein the defined viewpoint is a preferred viewpoint, being a viewpoint corresponding to that from which the orthodontist views the at least one tooth when applying a bracket hereon.

15.   (original) A system according to claim 11, wherein the displayed image includes a set of images of the at least one tooth from two or more preferred viewpoints.

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16.   (original) A system according to claim 11, wherein the displayed image includes a set, of images of different teeth.

17.   (original) A system according to claim 16, wherein the different displayed teeth are displayed in an order in which the teeth are attended to during bracket placement procedure.

18.   (currently amended) A system for facilitating the correct placement of one or more brackets on corresponding one or more teeth according to a predetermined treatment scheme, the system comprising:

a data input module for acquiring and storage of data representative of a three-dimensional teeth arrangement;

a processor and a software running in said processor for processing said data, to obtain a virtual representation of a three-dimensional teeth arrangement of a plurality of teeth on one or both jaws of an individual, said virtual representation including at least one bracket placed on said teeth;

an image generation module coupled to or running within said processor for generating an output data adapted to drive a display to display a virtual image of at least one tooth with a bracket thereon, the displayed image having three-dimensional qualities indicative of said at least one tooth as used from a defined viewpoint, wherein said three dimensional representation is suitably coded so that said displayed image appears as a three dimensional virtual image when said displayed image is viewed via a suitable optical arrangement, and said three dimensional virtual image according to rules applied to achieve the treatment outcome and display the treatment outcome, such that, while placing said one or more brackets directly on corresponding said one or more teeth of said individual, said displayed virtual image may be used as a visual comparison guide to assist in proper positioning of said one or more brackets directly on corresponding said one or more teeth of said individual; and

a display linked said image generating module for displaying said image.

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19.   (original) A system according to claim 18, comprising: database of virtual brackets from which said software can import brackets for combining with the teeth.

20.   (currently amended) A method for facilitating the correct placement of one or more real brackets on corresponding one or more teeth according to a predetermined treatment scheme, the method comprising:

selecting one or more virtual brackets corresponding to the one or more real brackets from a virtual bracket catalogue containing a plurality of virtual brackets

obtaining a virtual representation of a three-dimensional teeth arrangement of a plurality of teeth on one or both jaws of the individual with virtual brackets placed on said teeth, the position and orientation of the virtual brackets on said teeth in the virtual representation, ~~being~~ designed so as to achieve a desired treatment outcome;

processing said virtual representation to generate an output data, the output data driving a display to display a virtual image of at least one tooth with a virtual bracket thereon, the displayed virtual image having three-dimensional qualities indicative of said at least one tooth as viewed from a defined viewpoint, ~~wherein~~ said three dimensional representation ~~is~~ suitably coded so that said displayed image appears as a three dimensional virtual image when ~~said displayed image is~~ viewed via a suitable optical arrangement, and said three dimensional virtual image according to rules applied to achieve the treatment outcome and display the treatment outcome;

while placing the one or more real brackets directly on corresponding one or more teeth of said individual, using said displayed virtual image as a visual comparison guide to assist in proper positioning of the one or more real brackets directly on corresponding said one or more teeth of said individual.

21.   (previously presented) The method of claim 1, wherein said three dimensional representation is color-coded, and said optical arrangement comprises suitably colored lenses.

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22.   (previously presented) The method of claim 9, wherein said three dimensional representation is color-coded, and said optical arrangement comprises suitably colored lenses.

23.   (previously presented) A system according to claim 11, wherein said three dimensional representation is color-coded, and said optical arrangement comprises suitably colored lenses.

24.   (previously presented) The method of claim 20, wherein said three dimensional representation is color-coded, and said optical arrangement comprises suitably colored lenses.